REMARKS/ARGUMENTS

This Amendment is submitted to accompany a Request for Continued Examination (RCE). The RCE and the present Amendment are filed in response to the Final Office Action dated December 14, 2007, and within the three month period for

5   reply extending to March 14, 2008.

Claims 1, 7, 12, and 17 are currently amended.

Claims 10-11, 14, 16, and 20-27 are cancelled.

Claims 1-9, 12-13, 15, and 17-19 remain pending.

10   **Drawings**

On the Office Action Summary sheet, the Office has again objected to the original as-filed drawings. However, in the body of the Office Action, the Office has not elaborated further on the objection to the drawings. As previously indicated to the Office, the Applicant filed formal drawings on July 19, 2004, in response to the Notice to File

15   Corrected Application Papers. The Applicant's filing of formal drawings on July 19, 2004, is also confirmed by Private Pair. Therefore, the Office is again requested to withdraw the objection to the drawings and acknowledge receipt of the formal drawings filed July 19, 2004.

20   **Rejections under 35 U.S.C. 103**

Claims 1-3, 7, 12, 17, and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Black et al. ("Black" hereafter) (U.S. Patent No. 7,103,602) in view of Col et al. ("Col" hereafter) (U.S. Patent No. 6,330,657), and further in view of Oka et al. ("Oka" hereafter) (U.S. Patent Application Publication No. 2002/0108042). These

25   rejections are traversed.

In applying the combination of Black, Col, and Oka to reject claim 1, the Office has asserted that Black (column 2, lines 14-30) teaches a processor capable of executing a secure hash algorithm (SHA). However, the Applicant would like to clarify that Black teaches "... a de-duplicate processor for calculating a SHA value of the received data files

5   ..." The Applicant respectfully points out that Black does not teach a processor for executing a SHA computation <u>on a message</u>, as recited in amended claim 1. Rather, Black teaches a processor for calculating a SHA value of received <u>data files</u>. Additionally, the combination of Black, Col, and Oka does not teach or suggest that the "data files" of Black can represent a "message." The foregoing notwithstanding, the Applicant describes

10   below how the asserted combination of Black, Col, and Oka fails to teach each and every feature of amended claim 1.

First, the Office is requested to note that claim 1 has been amended to clarify that the first execution unit has an output that is connected to an input of the second execution unit. As discussed below, the combination of Black, Col, and Oka (particularly Col) fails

15   to teach or suggest the first execution unit having an output that is connected to the input of the second execution unit, as recited in amended claim 1, and as combined with the other defining features of the first and second execution units, as recited in amended claim 1.

In applying the combination of Black, Col, and Oka to reject claim 1, the Office

20   has asserted that Col (column 14, lines 7-14) teaches the first execution unit defined to perform a schedule computation on a data block of the message. The Office has also asserted that Col (column 14, lines 7-14) teaches that the first execution unit is defined to communicate a partial result of the schedule computation on the data block through its output to the input of the second execution unit, when the partial result becomes

25   available, and prior to completion of the schedule computation on the data block.

However, the Applicants do not believe that the disclosure of Col (column 14, lines 7-14) can be reasonably construed to teach the features of amended claim 1 regarding the first execution unit being defined to communicate a partial result of the schedule computation on the data block through its output to the input of the second execution unit.

5   Specifically, Col (column 14, lines 7-9) states that two parallel micro instructions are distributed as shown (in Figure 4) between the four execute stages 412-418. Col (column 14, lines 9-12) states that one of the micro instructions is routed to each of the integer execute stage 412, the floating point execute stage 414, and the first SIMD execute stage 416, via bus 422. Col (column 14, lines 12-14) states that the other micro

10   instructions is routed to the integer execute stage 412, and to the second SIMD execute stage 418, via bus 424. Additionally, Col (Figure 4) shows that a respective output of each of the integer execute stage 412, the floating point execute stage 414, the SIMD execute stage 416, and the SIMD execute stage 418 is ONLY connected to the store stage 420. Therefore, it should be understood that neither of the integer execute stage 412, the

15   floating point execute stage 414, the first SIMD execute stage 416, nor the second SIMD execute stage 418 has an output that is connected to an input of another of the integer execute stage 412, the floating point execute stage 414, the first SIMD execute stage 416, or the second SIMD execute stage 418. Specifically, the input of each of the execute stages 412, 414, 416, and 418 comes only from the load stage 410. Additionally, the

20   output of each of the execute stages 412, 414, 416, and 418 goes only to the store stage 420.

In view of the foregoing, the Applicant submits that Col (column 14, lines 7-14, and Figure 4) does not teach a first execution unit defined to communicate a partial result of the schedule computation on the data block through its output to the input of a second

25   execution unit, when the partial result becomes available, and prior to completion of the

schedule computation on the data block, as recited in amended claim 1. Moreover, none of the execution stages 412, 414, 416, and 418 of Col is defined to perform a schedule computation on a data block, or to perform a compression function, such as required by the first and second execution units, respectively, in amended claim 1.

5   In applying the combination of Black Col, and Oka to reject claim 1, the Office has asserted that Oka (paragraph [0153]) teaches a second execution unit defined to perform a compression function on a partial result received from a first execution unit. However, the Applicant finds no such teaching in paragraph [0153] of Oka. While Oka (paragraph [0153]) teaches that "... each selected signature module generates a signature based on the applicable signature algorithm (e.g., RSA, ECC) ...," one skilled in the art will understand that generation of a signature is not equivalent to, nor related to, performing a compression function. Therefore, the Applicant submits that Oka (paragraph [0153]) has no relevance to a second execution unit defined to perform a compression function on a partial result received from a first execution unit, as recited in amended claim 1. Moreover, the Office has not provided any explanation that would illuminate how the teachings of Oka (paragraph [0153]) are related to a second execution unit defined to perform a compression function on a partial result received from a first execution unit, as recited in amended claim 1.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Therefore, the Applicant submits that amended claim 1 is not rendered prima facie obvious by the combination of Black, Col, and Oka. The Office is requested to withdraw the rejection of amended claim 1 under 35 U.S.C. 103.

Moreover, the Applicant submits that the Office's statement that "it would have been obvious to a person of ordinary skill in the art to use Col's pairing of micro

instructions in the instruction queue with Black's system for data management, because it offers the advantage of being efficient in the execution of instructions," does not provide articulated reasoning with rational underpinning to support the Office's assertion that the microprocessor pipeline of Col can be modified to include communication of a partial

5   result from a first execution unit to a second execution unit in the microprocessor pipeline, and that such a modified microprocessor pipeline of Col can be used with Black's system for data management to execute a secure hash algorithm (SHA) computation on a message.

Additionally, notwithstanding the fact that Oka's disclosure regarding generation

10   of signatures is completely unrelated to performing a compression function, the Applicants submit that the Office has not provided any articulated reasoning with rational underpinning as to why one of ordinary skill in the art would be led to define either of the execute stages 412, 414, 416, and 418 of Col so as to perform the signature generation of Oka. Simply stated, signature generation as disclosed by Oka has no relevance to either

15   the microprocessor pipeline 400 of Col, or the data management system of Black.

Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR*, 550 U.S. at _____, 82 USPQ2d

20   at 1396. Therefore, the Applicant submits that amended claim 1 is not rendered prima facie obvious by the combination of Black, Col, and Oka. The Office is requested to withdraw the rejection of amended claim 1 under 35 U.S.C. 103.

Each of independent claims 7, 12, and 17 recite features similar to those argued above with regard to amended claim 1. Therefore, the Applicant submits that the

25   arguments presented above with regard to amended claim 1 are equally applicable to each

of amended claims 7, 12, and 17. Therefore, the Applicant submits that each of amended claims 7, 12, and 17 is not rendered prima facie obvious by the combination of Black, Col, and Oka. The Office is requested to withdraw the rejection of amended claims 7, 12, and 17 under 35 U.S.C. 103.

5   Because a dependent claim incorporates each and every feature of its independent claim, the dependent claim is patentable for at least the reasons provided for its independent claim. Therefore, each of dependent claims 2-3 and 19 is patentable for at least the same reasons as its independent claim. Thus, the Applicant requests the Office to withdraw the rejections of claims 2-3 and 19, under 35 U.S.C. 103.

10

Claims 4, 5, 8, and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Black, Col, and Oka in view of Lilly (U.S. Patent No. 6,829,355). These rejections are traversed.

Because a dependent claim incorporates each and every feature of its independent

15   claim, the dependent claim is patentable for at least the reasons provided for its independent claim. Therefore, each of dependent claims 4, 5, 8, and 13 is patentable for at least the same reasons as its independent claim. Thus, the Applicant requests the Office to withdraw the rejections of claims 4, 5, 8, and 13, under 35 U.S.C. 103.

20   Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Black, Col, and Oka, in view of Tague et al. ("Tague" hereafter) (U.S. Patent No. 4,799,181). This rejection is traversed.

Because a dependent claim incorporates each and every feature of its independent claim, the dependent claim is patentable for at least the reasons provided for its

25   independent claim. Therefore, dependent claim 6 is patentable for at least the same

reasons as independent claim 1. Thus, the Applicant requests the Office to withdraw the rejection of claim 6, under 35 U.S.C. 103.

5   Claims 9, 15, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Black, Col, Oka, and Lilly, in view of Gibson (U.S. Patent No. 5,155,820). These rejections are traversed.

Because a dependent claim incorporates each and every feature of its independent claim, the dependent claim is patentable for at least the reasons provided for its independent claim. Therefore, each of dependent claims 9, 15, and 18 is patentable for at

10   least the same reasons as its independent claim. Thus, the Applicant requests the Office to withdraw the rejections of claims 9, 15, and 18, under 35 U.S.C. 103.

The Applicant submits that all of the pending claims are in condition for allowance. Therefore, a Notice of Allowance is requested. If the Examiner has any

15   questions concerning the present Amendment, the Examiner is requested to contact the undersigned at (408) 774-6914. If any additional fees are due in connection with filing this Amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. SUNMP501). A duplicate copy of the transmittal is enclosed for this purpose.

20   Respectfully submitted,
MARTINE PENILLA & GENCARELLA, LLP

Kenneth D. Wright
25   Reg. No. 53,795

710 Lakeway Drive, Suite 200
Sunnyvale, California 94086
Tel: (408) 749-6900
30   **Customer Number 32,291**